A. Permit Certificate

MUNICIPAL
WASTEWATER REUSE PERMIT

LA-000208-01

City of Tetonia, LOCATED AT 105 Perry Avenue, Tetonia, ID 83452 AND IN **Township 6N, Range 45E, Section 29** IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE WITH THE WASTEWATER REUSE RULES (IDAPA 58.01.17) AND THE WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT, APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON **November 1, 2008**.

James Johnston
Idaho Falls Regional Administrator
Idaho Department of Environmental Quality

Date Issued:

DEPARTMENT OF ENVIRONMENTAL QUALITY
900 N. Skyline, Suite B
Idaho Falls, ID 83402
(208) 528-2650

POSTING ON SITE RECOMMENDED

B. Permit Contents, Appendices, and Reference Documents

Appendices

1. Environmental Monitoring Serial Numbers
2. Site Maps

References

1. Wastewater Reuse Permit Application Report, City of Tetonia, March 2006.

The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000208-01 and are enforceable as such. This permit does not relieve the City of Tetonia, hereafter referred to as the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practices
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season
GW	Ground Water
GWQR	IDAPA 58.01.11 "Ground Water Quality Rule"
Guidance	Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater, DEQ.
HLRgs	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to reuse hydraulic management units during the growing season. The HLRgs limit is specified in Section F. Permit Limits and Conditions.
HLRngs	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLRngs limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop, and calculated monthly during the growing season (GS). Calculation methodology for the IWR can be found at the following website: http://www.kimberly.uidaho.edu/water/appndxet/index.shtml. The equation used to calculate the IWR at this website is: $IWR = (CU - P_e) / E_i$ CU is the monthly consumptive use for a given crop in a given climatic area. CU is synonymous with crop evapotranspiration P_e is the effective precipitation. CU minus Pe is synonymous with the net irrigation requirement (IR) E_i is the irrigation system efficiency. To obtain the gross irrigation water requirement (IWR), divide the IR by the irrigation system efficiency.
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season
NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation

C. Abbreviations, Definitions

Reuse	The use of reclaimed wastewater for beneficial uses including, but not limited to, land treatment, irrigation, aquifer recharge, use in surface water features, toilet flushing in commercial buildings, dust control, and other uses.
Reuse Reporting Year	The reporting year begins with the non-growing season and extends through the growing season of the following year, typically November 01 – October 31. For example, the 2000 Reporting Year was November 01, 1999 through October 31, 2000.
SAR	Sodium Absorption Ratio
SI	Supplemental Irrigation water applied to the reuse treatment site.
Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically not more than 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 *Water Quality Standards and Wastewater Treatment Requirements*
Typical Crop Uptake	Typical Crop Uptake is defined as the <u>median</u> (not average) constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
WW	Wastewater applied to the reuse treatment site

D. Facility Information

Legal Name of Permittee	City of Tetonia
Type of Wastewater	Municipal, Class E (not disinfected).
Method of Treatment	Facultative lagoon with slow-rate land application using two (2) portable "big-gun" cart assemblies. (irrigation efficiency – 60%)
Type of Facility	Public/Municipal
Facility Location	Approximately 1/2-mile west of the City of Tetonia
Legal Location	Township 6N Range 45E Section 29
County	Teton
USGS Quad	Tetonia
Soils on Site	Driggs, Wiggleton 0-25" – Silt loam with gravel 25-42" – sand with gravel and cobbles 42-60" – coarse gravel and cobbles
Depth to Ground Water	2-5 ft. to seasonal high groundwater (irrigation induced) Approximately 60-90 ft. to regional groundwater (static level).
Beneficial Uses of Ground Water	Domestic, Agriculture
Nearest Surface Water	Spring Creek – ¼ mile south (intermittent) Teton River – 3 ½ miles west
Beneficial Uses of Surface Water	Agriculture, Recreation, Aquatic Life *Teton River TMDL for sediment, nutrients (phosphorus)
Responsible Official **Mailing Address** **Phone / Fax**	Nancy Nead, Mayor P.O. Box 57 Tetonia, ID 83452 Tel: (208) 456-2249 Fax: same
Facility Contact **Mailing Address** **Phone / Fax**	Mitch Smaellie P.O.Box 57 Tetonia, ID 83452 Tel: (208) 456-2249 Fax: same
Facility Consultants **Mailing Address** **Phone / Fax**	Chris Park, P.E. Schiess and Associates 7103 S. 45 W. Idaho Falls, ID 83402 Tel: (208) 522-1244 Fax: (208) 522-9232

E. Compliance Schedule for Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the Department in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-208-01 **July 31, 2006**	Posting. All posting requirements required by Section F – "Fencing and Posting" of this permit shall be installed not later than July 31, 2006.

F. Permit Limits and Conditions

1) The Permittee is allowed to apply wastewater and treat it on a reuse site as prescribed in the tables below and in accordance with all other applicable permit conditions and schedules.

Category	Permitted Limits and Conditions
Type of Wastewater	Municipal Wastewater, Class E (not disinfected at this time).
Application Site Area	15.7 acres
Application Season	Growing Season Only
Growing Season (GS)	April 1 – October 31.
Non-Growing Season (NGS)	NGS Application Not Allowed
Certified Operator	Required. See IDAPA 58.01.16.203.
Reporting Year for Annual Loading Rates	November 1 – October 31 (214 days)
Maximum Hydraulic Loading Rate, Growing Season	30.5 inches/acre, 13.00 MG total. *Wastewater Only. Supplemental Irrigation not allowed.
Maximum Hydraulic Loading Rate, Non-Growing Season	NGS application not allowed.
No Runoff	Runoff from the designated reuse site is not allowed.
Ground Water Quality	Ground Water Quality shall be in compliance with *Idaho Ground Water Quality Rule* IDAPA 58.01.11.
Maximum BOD Loading	25 pounds/acre-day seasonal average, growing season only.
Maximum Nitrogen Loading	125 lb/ac-yr. *Wastewater Only. Supplement fertilizer not allowed.
Maximum Phosphorus	20 lb/ac-yr *Wastewater Only. Supplemental fertilizer not allowed.
Construction Plans	Prior to construction or modification of all wastewater facilities associated with the reuse system or expansion, detailed plans and specifications shall be reviewed and approved by DEQ. Within 30 days of completion of construction, the permittee shall submit as-built plans for review and approval.
Grazing	Grazing not allowed. Animals shall not be grazed on land where Class E municipal wastewater is applied, and animals shall not be fed harvested vegetation irrigated in this manner within four (4) weeks of application.

F. Permit Limits and Conditions

Category	Permitted Limits and Conditions
Allowable crops	Crops grown for direct human consumption (those crops that are not processed prior to consumption) are not allowed.
Fencing and Posting	Fencing: Woven pasture fence, or equivalent, around the perimeter of the application site is required. Posting Required. Signs should read "Sewage Effluent Application - Keep Out" or equivalent, and be posted every 500 feet and at each corner of the outer perimeter of the buffer zone(s) of the site.
Supplemental Irrigation Water Protection	DEQ approved backflow prevention devices are required for all wastewater and fresh irrigation water interconnections.
Odor Management	The wastewater treatment plant, reuse facilities, and other operations associated with the facility shall not create a public health hazard or nuisance conditions, including odors.
Disinfection	Disinfection not required at this time.
Buffer Zones	The following minimum buffer distances shall be provided between areas using reclaimed water and: Inhabited Dwellings: 1,000 feet or more; Areas Accessible to Public: 1,000 feet or more; Public Water Supplies: 1,000 feet or more; Private Water Supplies (for human consumption): 500 feet or more; Permanent or Intermittent Surface Water 100 feet or more; Temporary Surface Water (Ditches and Canals): 50 feet or more All buffer zones must comply with, at a minimum, local zoning ordinances. Any mitigation measures to reduce buffer zone distances must be reviewed and approved by DEQ prior to implementation.

G. Monitoring Requirements

1) Appropriate analytical methods, as given in the *Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater* or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the Annual Wastewater Reuse Site Performance Report ("Annual Report") described in Section H.1 – Standard Reporting Requirements.
2) The permittee shall monitor and measure parameters and submit information as stated in the Facility Monitoring Table in this section.
3) Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
4) Monitoring locations are described in Appendix 1. Environmental Monitoring Serial Numbers.
5) Monitoring is required at the frequency shown in the table below if wastewater is applied anytime during the time period shown. Unless otherwise agreed in writing by the DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Table as follows.
6) If the soil management unit is less than 15 acres, use 5 sub-samples. If the soil management unit is greater than 15 acres, use 10 sub-samples.
7) Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches. The soil samples collected at 0-12 inches from each sample location shall be composited. Similarly, all soil samples collected at 12-24 inches shall be composited and all soil samples collected at 24-36 inches shall be composited. This method will yield three samples for analysis, one for 0-12 inches, one for 12-24 inches and one for 24-36 inches for each soil management unit.
8) Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.

Facility Monitoring Table

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Weekly (Growing Season Only)	Discharge Point of Wastewater to Reuse (Effluent Transfer Structure)	Hours, Volume, and Depth of Wastewater land applied	Operating Hours, Gallons, and Depth (inches/acre) applied to the Hydraulic Management Unit
Monthly (Growing Season Only)	Discharge Point of Wastewater to Reuse (Effluent Transfer Structure)	Grab Sample of Wastewater Effluent to land application.	Total Coliform Total Kjeldahl Nitrogen, Nitrate+Nitrite-Nitrogen, Total Phosphorus, Total Dissolved Solids, Chemical Oxygen Demand, pH
Annually	Each SMU	Composite soil samples at three depths – 1st foot, 2nd foot and 3rd foot (see note 7)	Electrical Conductivity, nitrate-N, ammonium-N, pH, plant available phosphorous – (Olsen method)
Annually	Each HMU	Calculate and Report Acres used for land application	Acres used during GS

G. Monitoring Requirements

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Annually	Each HMU	Calculate and Report Growing Season Wastewater Loading Rate	Million Gallons and inches/acre
Annually	Each HMU	Calculate and Report Seasonal Average COD loading (Growing Season Only)	COD applied in lbs/acre-day (Seasonal Average, based on 214-day season)
Annually	Each HMU	Calculate and Report Total Nitrogen and Total Phosphorus loading from wastewater	Nitrogen and Phosphorus applied in lbs/acre-year
Annually	All flow measurement locations.	Calculate, Document, and Report the Flow measurement calibration of all flows to land application.	Document the flow measurement calibration of all flow meters, pumps, and hour meters used to directly or indirectly measure all wastewater, tail water, flushing water, and supplemental irrigation water flows applied to each HMU.

H. Standard Reporting Requirements

1. The permittee shall submit an Annual Wastewater Reuse Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year which shall cover the previous year (see section F for reuse reporting period). The Annual Report shall include results for monitoring required in Section G, status of compliance activities, and an interpretive discussion of monitoring data (ground water, vadose zone, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.

2. The annual report shall contain the results of the required monitoring as described in Section G. Monitoring Requirements. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report.

3. The annual report shall be submitted to the Engineering Manager in the Idaho Falls Regional Office.

   Greg Eager, P.E.
   Regional Engineering Manager
   Idaho Falls Regional Office
   900 N. Skyline, Suite B
   Idaho Falls, ID 83402
   208-528-2650

   One copy of the annual report shall also be mailed to:

   Richard Huddleston, P.E.
   Wastewater Program Manager
   1410 N. Hilton
   Boise, ID 83706
   208-373-0561

4. Notice of completion of any work described in Section E. Compliance Schedule for Required Activities shall be submitted to the Department within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.

5. All laboratory reports containing the sample results for monitoring required by Section G. Monitoring Requirements of this permit shall be submitted with the Annual Report.

I. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater Reuse Permit Regulations in conformance with the DEQ approved Wastewater Reuse Permit Application Report which describes the operation, maintenance, and management of the wastewater treatment system.

2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site. Wastewater discharges to surface water that require a permit under the Clean Water Act must be authorized by the U.S. Environmental Protection Agency.

3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.16.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:

a. Apply wastewater as evenly as practicable to the treatment area;
b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.

4. The permittee shall:

a. Manage the wastewater reuse treatment site as a quasi-agronomic operation where vegetative cover is grown to utilize the nutrients and minerals in the wastewater, and,
b. Not hydraulically overload any particular areas of the wastewater reuse treatment site.

5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water.

6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Wastewater Reuse Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.

7. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:

a. Enter the permitted facility,
b. Inspect any records that must be kept under the conditions of the permit.
c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.

8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:

a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Regional Office: see Permit Certification Page
Emergency 24 Hour Number 1-800-632-8000

d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:

i. A description of the non-compliance and its cause;
ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.

e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.

9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.

10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control.

J. Standard Permit Conditions: Modifications, Violations, and Revocations

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.

2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.

3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in I. *Standard Reporting Requirements*, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.

4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.

5. Any person violating any provision of the Waste Water Reuse Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars ($10,000) or one thousand dollars ($1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.

6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Reuse Permit Regulations.

7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of the Department of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.

8. If, pursuant to Idaho Code §67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of the Department of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23..

9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.

10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

Appendix 1
Environmental Monitoring Serial Numbers

HYDRAULIC MANAGEMENT UNITS

Serial Number	Description	Acres
MU-020801	Land Application Site	15.7

WASTEWATER SAMPLING POINTS

Serial Number	Description
WW-020801	Effluent Transfer Structure

SOIL MONITORING UNITS

Serial Number	Description	Associated MU
SU-020801	Land Application Site	MU-020801

LAGOONS

Serial Number	Description
LG-020801	Facultative Lagoon

Appendix 2
Site Maps

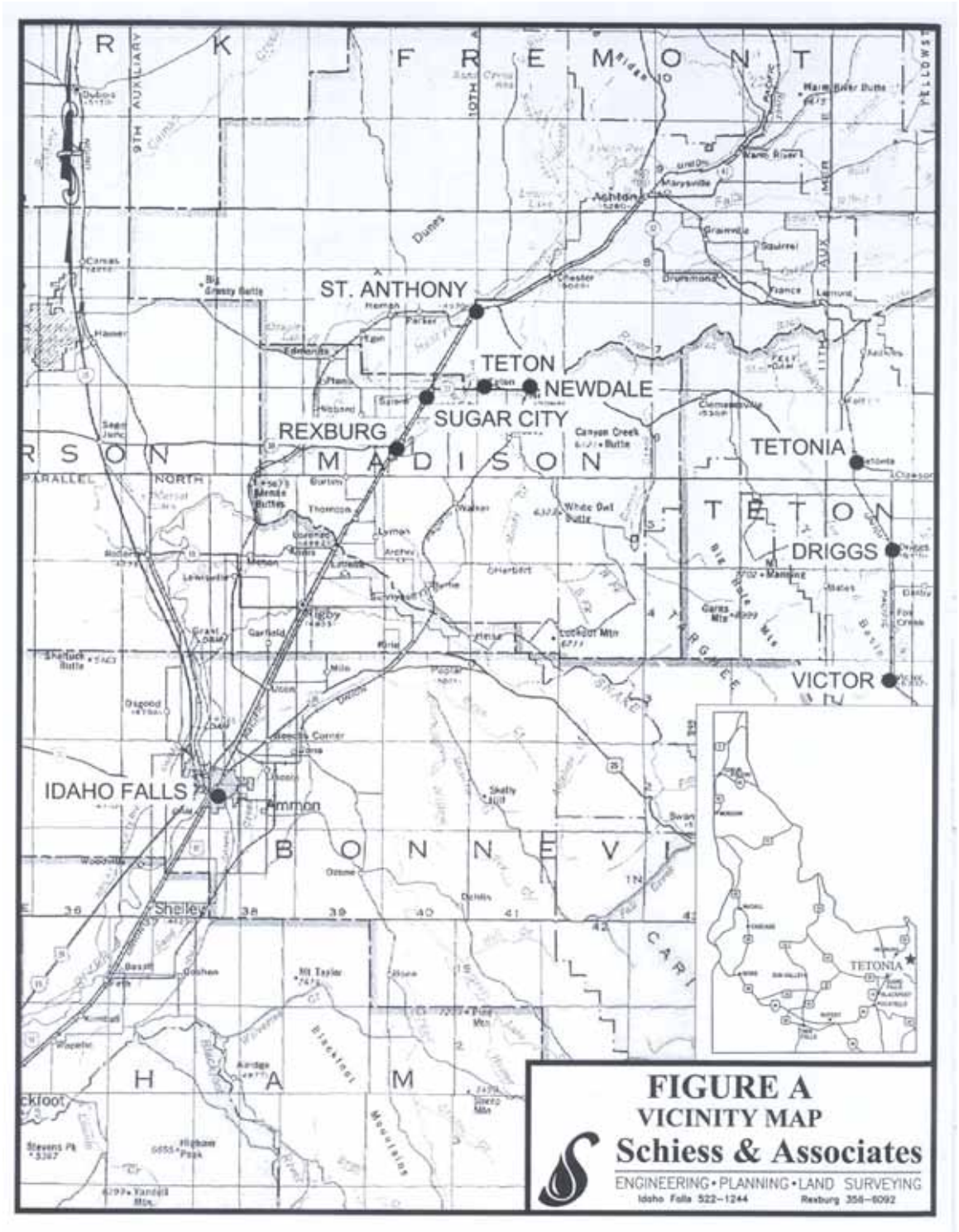

Figure 1. Vicinity Map.

Appendix 2
Site Maps

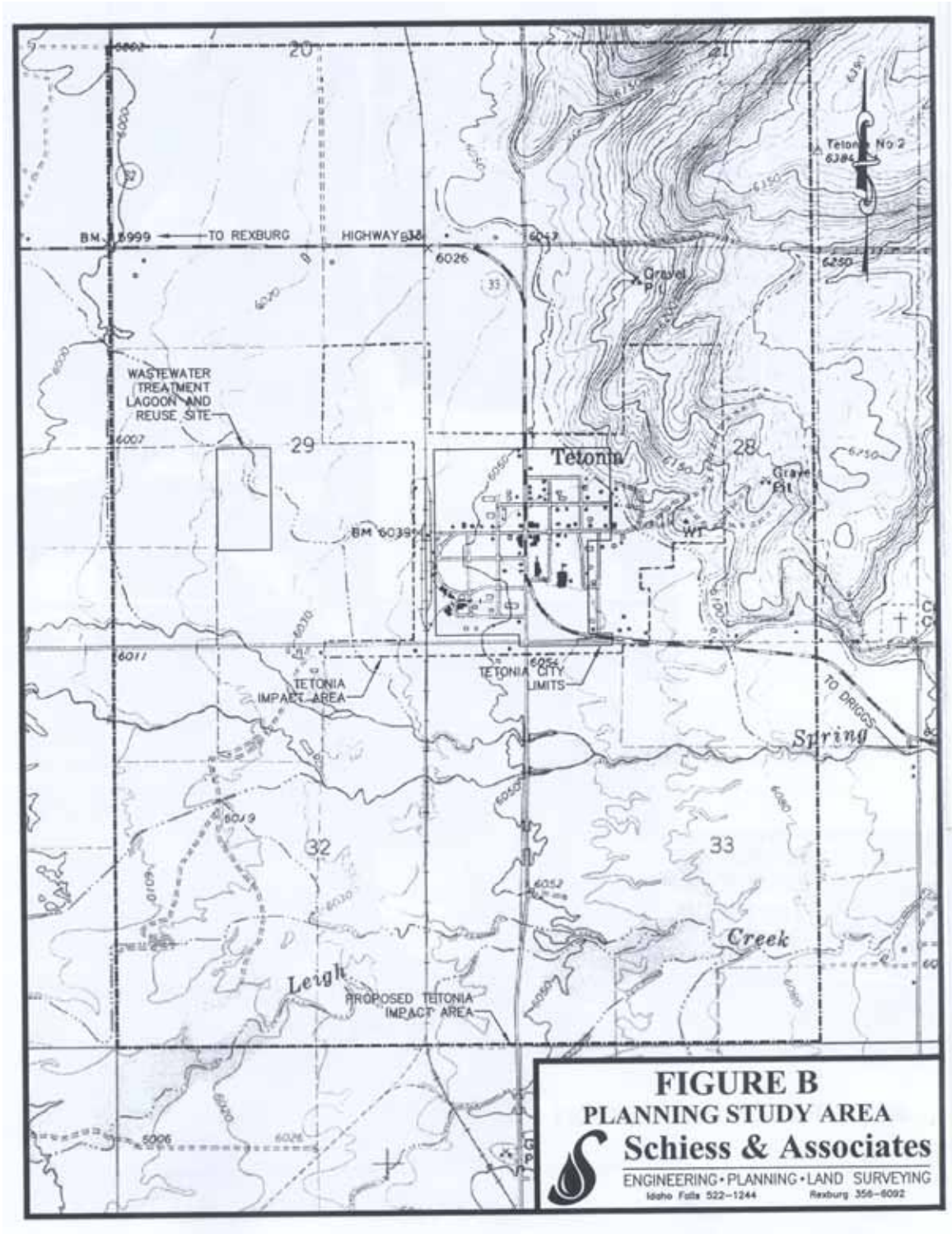

Figure 2. Reuse Site Location.

Appendix 2
Site Maps

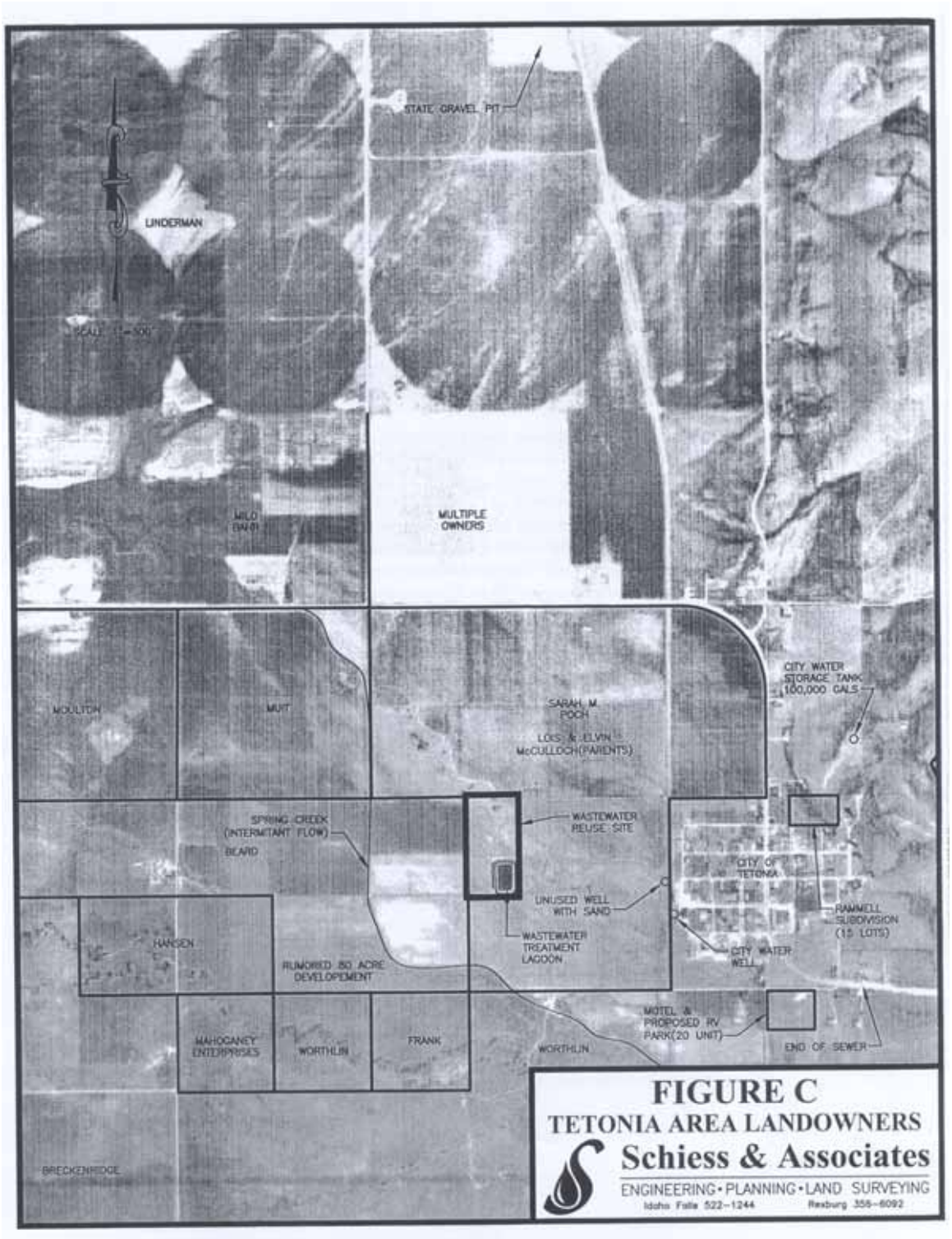

Figure 3. Land Ownership.

Appendix 2
Site Maps

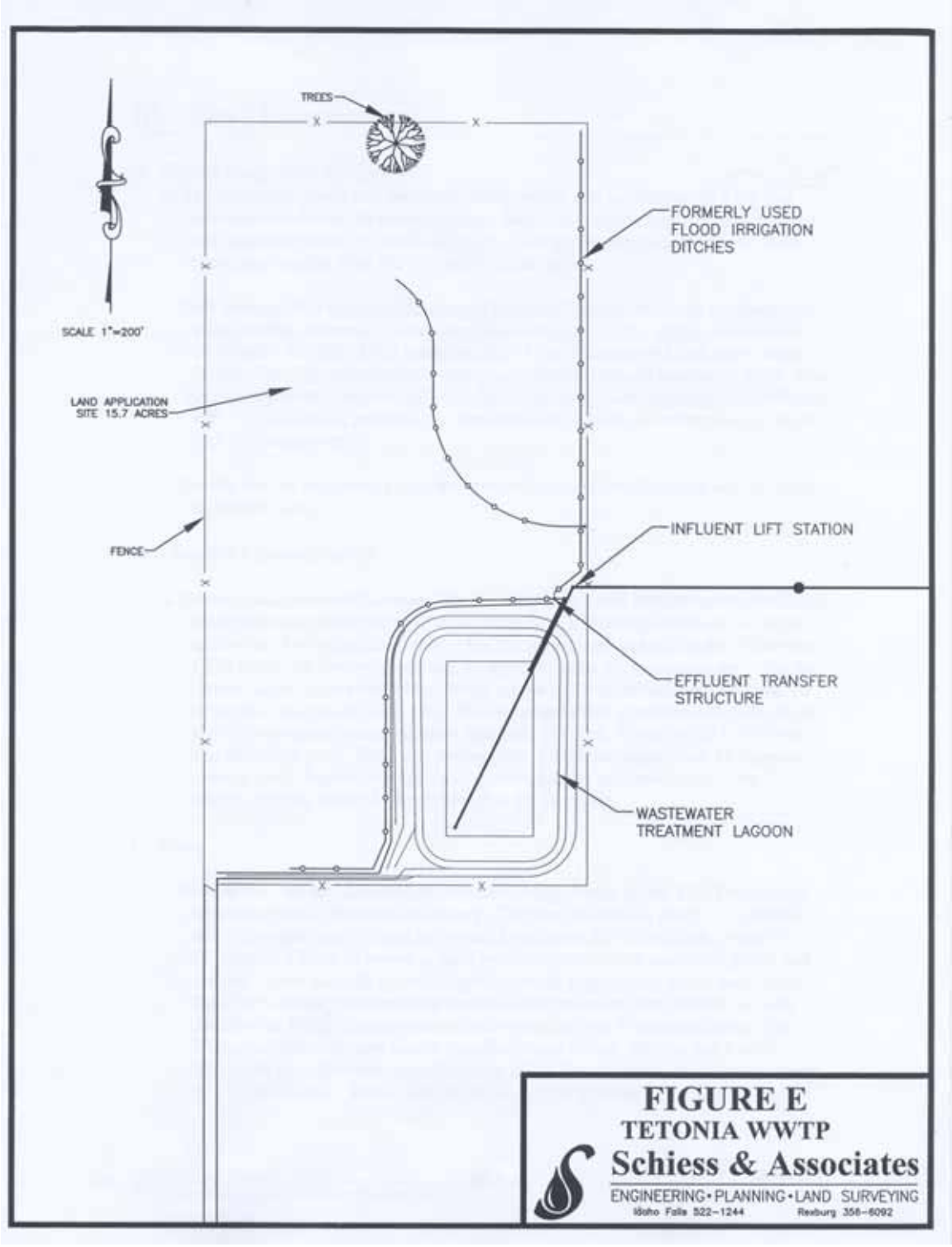

Figure 4. Reuse Site.